Amendments To The Drawings:

The attached drawing sheets include changes to FIGS. 1-3 and 5. These sheets contain corrections shown in red for the examiner's approval and are requested to replace the original sheets of FIGS. 1-3 and 5.

Attachment: Replacement Sheet(s) of FIGS. 1-3 and 5

Annotated Sheet(s) Showing Changes of FIGS. 1-3 and 5

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1-10 are pending before this amendment. By the present amendment, claims 1, 5, 7, and 10 are amended. No new matter has been added.

In the office action (page 2), the drawings are objected to because FIGs 1-3 and 5 contain numeric labels, which make it hard to understand the invention. In response the applicants have subsequently amended FIGS. 1-3 and 5 to have alphanumeric labels as suggested by the examiner and are attaching the corresponding annotated and replacement drawings in the appendix of this response. Accordingly, the applicants respectfully request that this objection to the drawings be withdrawn.

In the office action (page 3), claim 1 stands rejected due to obvious-type double patenting as being unpatentable over the corresponding claim 6 of the copending Application No. 10/537,144. Also, in the office action (page 4), claim 7 stands rejected due to obvious-type double patenting as being unpatentable over the corresponding claim 1 of Application No. 10/537,144. In response, a terminal disclaimer is submitted herewith, thereby overcoming the provisional rejection under the judicially created doctrine of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

In the office action (page 4), claims 1-10 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Publication No. 2003/0118015 (Gunnarsson) in view of U.S. Publication No. 2002/0187780 (Souissi). The "et al." suffix is omitted in a reference name. The applicants respectfully traverse this rejection.

The present invention relates to a method for automatically searching a wireless LAN AP (access point), wherein the automatically searching a wireless LAN AP based on wireless LAN AP location information provided within a service area of a base station and terminal location information through a GPS (global positioning system), and a terminal for performing the method. (specification at page 1, lines 12-18). The wireless LAN module of the present invention will detect a beacon signal periodically output from the wireless LAN AP and search a wireless LAN AP only when the drive is started through a comparison of location information of the wireless LAN AP stored in the AP location information storage unit with location information of the terminal tracked by the GPS receiving module **when the terminal is within a predetermined radius of service information of the location information of the wireless LAN AP acquired** (specification at page 10, lines 4-9)

The applicants have amended independent claim 1 (and similarly independent claims 7 and 10) to better clarify the presently claimed invention as described above and for being patentable over the applied reference(s). Claim 1 now recites, inter alia:

> --**wherein the driving start time is activated when the current location information of the terminal tracked in (b) is within a predetermined radius of service information of the location information of the wireless LAN AP acquired in (a)**.

Support for the limitations added to claim 1 can be found on at least page 9, lines 5-16 and page 10, lines 4-9 and FIGs. 3-5.

The applicants' respectfully submit that Gunnarsson and/or Souissi fails to teach or suggest this limitation of the present invention of amended claim 1. The examiner concede that Gunnarsson does not teach acquiring location information of the wireless LAN AP provided in a service area of a base station from the base station connected

through the mobile communication module. To cure this deficiency the examiner looks to Souissi for providing a roaming table containing **only** geographic locations of preferred networks, which can be a WLAN which contains AP (OA page 5). However, nowhere in Gunnarsson and/or Souissi teaches or suggests activating/scanning for networks when the mobile device travels within a preferred network based on when the current location of the mobile device is within a **predetermined service radius of the preferred network** to save power in the mobile device.

In contrast, FIGs. 5 and 6 illustrates that Souissi begins scanning for the networks 504 and 505 once the device enters a UMTS coverage area having a defined respective CID, wherein a respective roaming table mechanism 600 is associated with the respective CID and **not** when device coverage area of networks 504 and/or 505. As should be appreciated by the examiner, nowhere does Souissi mentions scanning once the device enters that **service radius of the respective networks 504 and 505** Souissi ([0062]-[0065] and [0083]).

In contradistinction, FIGs. 3 and 4 of the present invention shows an operational diagram where a dual terminal automatically searches a wireless LAN AP for activating a drive start time to detect a beacon signal periodically output by the wireless LAN AP wherein;

> "the dual terminal 32 which was provided in the service area of a first base station 31 is moved to reach the location 35 for entering the service area 34 of a second base station 33, the dual terminal uses the mobile communication module 22 to update the location of the second base station 33 or register the same.
>
> While performing the location update or the registration process, the dual terminal 32 receives the location information of third and fourth wireless LAN APs 36 and 37 located within the service area 34 of the second base station 33 from the second base station 33, and stores the same in the AP location information depository 24.

When receiving and storing the location information on the third wireless LAN APs 36 and 37, the dual terminal 32 drives the GPS receiving module 23 and consecutively tracks the current location of the dual terminal 32.

When checking through the GPS receiving module 23 that the dual terminal 32 has entered the service area 38 of the fourth wireless LAN AP 37, the dual terminal 32 drives the wireless LAN module 21 of the dual terminal 32, and starts detecting the beacon signal periodically output by the fourth wireless LAN AP 37. When the wireless LAN module 21 of the dual terminal 32 detects the beacon signal of the fourth wireless LAN AP 37, the dual terminal 32 receives the data service through the wireless LAN service provided by the fourth wireless LAN AP 37.

When no location information on the wireless LAN AP is received while performing the location update or registration process through the second base station 33, the dual terminal 32 does **not** drive the GPS receiving module 23 of the dual terminal within the service area 34 of the second base station 33.

FIG. 4 shows a configuration diagram of the AP location information depository 24 in the dual terminal shown in FIG. 2.

As shown, the AP location information depository 24 comprises a section for storing geographical information 41 of the wireless LAN AP and a section for storing a radius of service 42 of the wireless LAN AP.

In particular, the geographical information **41 of the wireless LAN AP has latitude and longitude information accurately measured through the GPS. The radius of service 42 of the wireless LAN AP has a 10m unit of calculation, and the geographical information 41 may have a measured radius of service of the actual wireless LAN AP in order to acquire more accurate information on the radius of service**"

(specification at page 8, line 17 to page 10, line 9)

As a result, the present invention is able to further reduce power consumption since the wireless LAN AP in service only searched **when the terminal is within a predetermined radius of service information of the location information of the wireless LAN AP acquired**, and user's inconvenience caused by searching the wireless LAN AP is removed since the dual terminal automatically searches the wireless LAN AP.

Accordingly, the applicants respectfully submit that Gunnarsson either alone or in

combination with Souissi fails to teach or suggest the limitations of claim 1, which recites inter alia: --**wherein the driving start time is activated when the current location information of the terminal tracked in (b) is within a predetermined radius of service information of the location information of the wireless LAN AP acquired in (a)**--, because nowhere does Gunnarsson neither alone or in combination with Souissi teaches, suggests, or even mentions scanning for LAN AP when a device/mobile station is within a predetermined **radius** of the respective wireless LAN AP in order to save power for the device/mobile station.

Independent claims 7 and 10 recites similar features to those found in claim 1. Therefore, for reasons analogous to those argued above with respect to claim 1, claims 7 and 10 are patentable over the applied references.

As to claims 2-6 and 8-9, the applicants respectfully submit that these claims are allowable at least since they depend from either claim 1 or claim 7, which is now considered to be in condition for allowance for the reasons mentioned above for claim 1.

For the reasons set forth above, the applicants respectfully submit that claims 1-10, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter.

This amendment is considered to be responsive to all points raised in the office action.

Should the examiner have any remaining questions or concerns, the examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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APPENDIX OF ATTACHMENTS

Replacement Sheets of FIGS. 1-3 and 5
(a total of 3 sheets of drawings)

and

Annotated Sheets Showing Changes of FIGS. 1-3 and 5
(a total of 3 sheets of drawings)

1/3

FIG.1

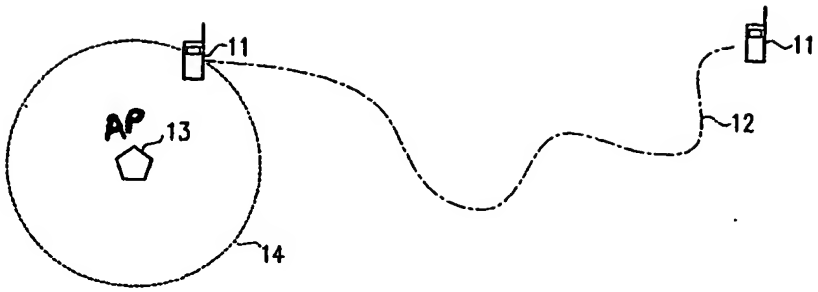

11
AP
13
14
12
11

FIG.2

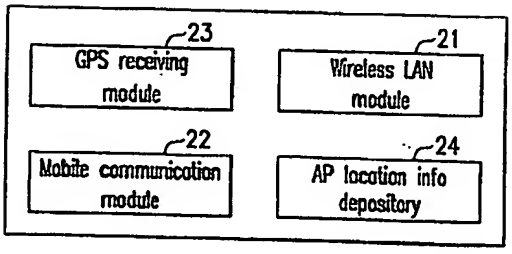

23
GPS receiving module
21
Wireless LAN module
22
Mobile communication module
24
AP location info depository

FIG.3

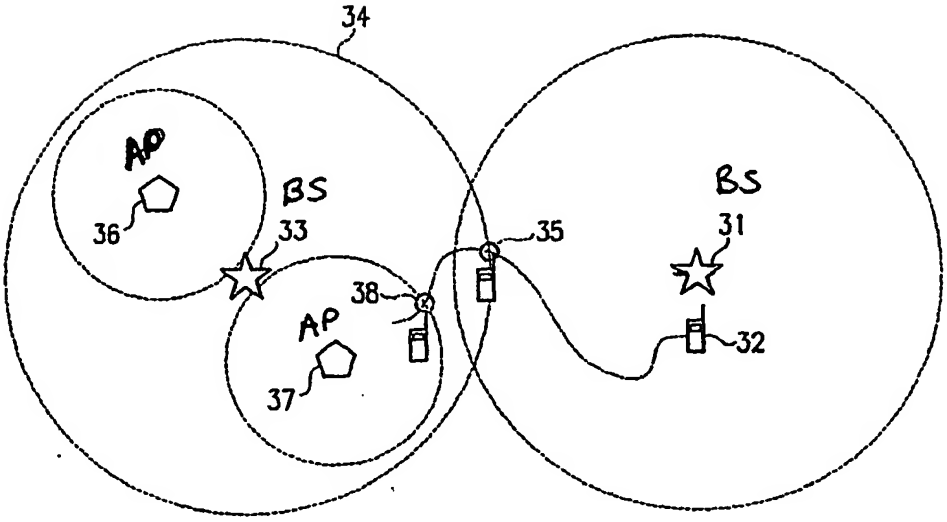
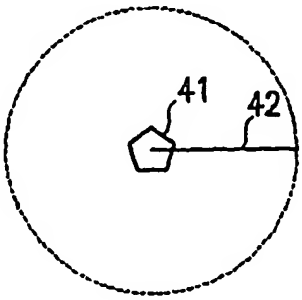


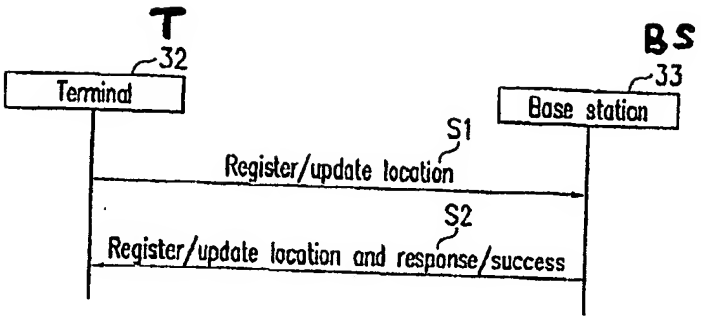
FIG.4



41 AP geographical location	42 AP radius of service

3/3

FIG.5


T
32
Terminal
BS
33
Base station
S1
Register/update location
S2
Register/update location and response/success